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Amendments to the Claims:

Please cancel Claims 82-91 without disclaimer or prejudice to applicants' right to pursue the subject matter of these claims in a future divisional application.

Please amend claims 76 and 79 as set forth below.

1-75. (Canceled)

76. (Currently amended) A method of detecting the presence or absence of a mutation in the sequence of polycystic kidney disease type 2 (*PKD2*) ~~*PKD2*~~ gene in a human subject, comprising the steps of:
- (a) obtaining a polynucleotide sample containing the sequence of *PKD2* gene from a human subject;
 - (b) comparing the polynucleotide sample to a reference human wild-type *PKD2* sequence; and
 - (c) determining the differences, if any, between the sequence of *PKD2* gene in the polynucleotide sample and the reference wild-type *PKD2* sequence, wherein the differences are mutations of *PKD2* gene which comprise one or more deletion, insertion, point, or rearrangement mutations; thereby detecting the presence or absence of a mutation in the sequence of *PKD2* gene in a human subject.
77. (Previously presented) The method of Claim 76, wherein the subject is an embryo, fetus, newborn, infant, or adult.

78. (Previously presented) The method of Claim 76, wherein the polynucleotide sample is DNA or RNA.
79. (Currently amended) A method of detecting the presence or absence of a mutation in the sequence of polycystic kidney disease type 2 (PKD2) ~~PKD2~~ gene in a human subject, comprising the steps of:
- (a) obtaining a polynucleotide sample containing the sequence of *PKD2* gene from a human subject; and
 - (b) performing sequence analysis of the polynucleotide sample to detect the presence or absence of a mutation in the sequence of *PKD2* gene of the human subject, wherein the mutation comprises a deletion, insertion, point, or rearrangement mutations.
80. (Previously presented) The method of Claim 79, wherein the subject is an embryo, fetus, newborn, infant, or adult.
81. (Previously presented) The method of Claim 79, wherein the polynucleotide sample is DNA or RNA.
- 82-91. (Canceled)